

REMARKS/ARGUMENTS

Claims 1-17 are pending in the application.

In view of the Examiner's comment on page 5 of the Office Action that the Jourdan reference provides the cylindrical liners 25 with a plurality of openings with at least one opening at or near the free ends (actually only near, as provided by the longitudinal openings or slots 26 through which gas can enter or leave the liners as shown by the arrows 23 –see Figs. 3 and 4 and the description in column 4, lines 39 – 43), applicants have amended claim 1 to clarify that it is only the free ends of the hollow domes 7 that are provided with the openings 8, as clearly shown in the drawings and described, for example, on page 4, line 16, and page 7, lines 4-9, regarding the flow of the exhaust gas through the hollow domes 7. Thus, it is respectfully submitted that the foregoing clarification to claim 1 does not involve new issues.

Claim Rejections – 35 USC § 103

To clarify the difference between applicants' catalytic converter, as defined in claim 1, and the exhaust system of the primary reference to Jourdan, attached is a colorized drawing sheet. The Jourdan device is shown in the top portion of this colorized drawing, and Fig. 2 of the present application is shown in the bottom portion thereof, wherein in both devices the direction of flow of exhaust gas is emphasized by depicting such flow with red arrows.

The Examiner has indicated that, among others, claim 1 is unpatentable over the combination of Jourdan and Karlsson, with Karlsson being cited for walls coated with catalytically active material.

As indicated above, Jourdan discloses cylindrical liners 25 having longitudinal openings 26 on their sides; in other words, the free ends of the liners are closed, as clearly shown in the broken away portion of Fig. 3 of Jourdan. Disposed between the cylindrical liners is a sound dampening material that is impregnated with a catalyst. Karlsson discloses providing the interior of a housing of a catalytic converter with a catalytically active surface. Applicants respectfully submit that the combination of Jourdan and Karlsson would not suggest applicants' claim 1 to one of ordinary skill in the art.

In particular, if instead of the catalytically impregnated sound dampening material of Jourdan a catalytic coating were to be provided, only minimal contact of the exhaust gas with the catalytically coated surfaces would be provided. This can clearly be seen from the attached colorized Fig. 3 of Jourdan, in which the direction of flow of the exhaust gases is illustrated by the red arrows. As these arrows show, the exhaust gases flow transversely through the cylindrical liners, namely transverse relative to the surfaces of the cylindrical liners through the plurality of longitudinal openings or slots distributed over the sides or periphery of the cylindrical liners.

In contrast to the structural arrangement provided by Jourdan, with applicants' arrangement as defined in claim 1, the openings 8 are provided only at the free ends of the hollow domes 7, so that the opening 8 of one hollow dome that is disposed on one wall is disposed in a space between the hollow domes disposed on the other wall. Due to the fact that the openings 8 are provided only at the free ends of the hollow domes, the exhaust gas stream in the housing of the catalytic converter is deflected in the region of the openings 8 at the free ends of the hollow domes 7, as clearly shown by the red arrows in the colorized Fig. 2 shown at the bottom of the

attached drawing sheet, and as clearly described in the specification of the present application, for example at the top of page 4 and at the bottom of page 7. Thus, with the arrangement defined in applicants' claim 1, the exhaust gases must flow through between adjacent hollow domes, and in so doing must flow along the surfaces of the interior walls of the housing that are provided with catalytically active material. Only by providing this extended flow along interior wall surfaces is it possible to achieve an adequate catalytic action. This extended flow of the exhaust gas can be clearly seen by the red arrows in the attached Fig. 2 of applicants' device.

It is respectfully submitted that the combination of references cited by the Examiner cannot suggest to one of ordinary skill in the art the critical feature of applicants' claim 1 that the openings 8 are disposed only at the free ends of the hollow domes 7, as a result of which the exhaust gas stream in the housing is deflected or diverted in the region of the openings 8 at the free ends of the hollow domes 7. Rather, as can be clearly seen by the red arrows in the attached colorized drawing of Fig. 3 of Jourdan, as a consequence of the plurality of openings or slots on the periphery of the cylindrical liners of Jourdan, no diversion of the flow of exhaust gas occurs. However, it is respectfully submitted that it is only due to applicants' different configuration and arrangement of the openings at only the free ends of the hollow domes that an adequate catalytic action with a catalytically coated surface can occur. Applicants further respectfully submit that the cited combination of references does not suggest applicants' arrangement of openings exclusively at the free ends of the hollow domes in order thereby to enable use of a catalytically active coating instead of the catalytically impregnated sound dampening material of Jourdan.

Applicants furthermore respectfully submit that the Examiner has not established a prima facie case of obviousness in that the suggestion or motivation to combine the cited references has not been shown to exist as required by MPEP 2143.01. It is respectfully submitted that this suggestion can come only with the hindsight teaching of applicants' claim 1. Furthermore, a combination of Karlsson with Jourdan would change the principle of operation of Jourdan. This is clearly not permitted pursuant to MPEP 2143.01 VI. The Jourdan construction clearly contemplates flow through a sound dampening material, for which reason as shown by the red arrows the flow proceeds through the slots of one cylindrical liner directly through the dampening material and through slots of the adjacent cylindrical liner. Thus, replacing the sound dampening material of Jourdan with catalytically active coated surfaces as in Karlsson would impermissibly change the principle of operation of Jourdan.

In view of the foregoing discussion, applicants respectfully request reconsideration of the allowability of applicants' pending claims 1-17. However, should the Examiner have any further comments or suggestions, the undersigned respectfully requests a telephone interview in order to resolve any outstanding issues and to expedite placement of the application into condition for allowance.

Respectfully submitted,

/Robert W. Becker/

Robert W. Becker, Reg. 26,255
Attorney for Applicants

ROBERT W. BECKER & ASSOCIATES

707 State Hwy 333, Ste. B
Tijeras, New Mexico 87059-7507

Telephone: 505 286 3511
Telefax: 505 286 3524

RWB:rac
Attachment